

U.S. Patent Application No. 10/607,612
Amendment dated March 22, 2006
Reply to Office Action of January 26, 2006

REMARKS/ARGUMENTS

This paper is in response to the Final Office Action of January 26, 2006. Applicants thank the Examiner for his careful review of this application. Applicants amend independent claims 1, 9, and 19 and dependent claims 4, 12, 14, and 24. Claims 20 and 23 have been canceled. Claims 29 and 30 are newly added. The amended and newly added claims introduce no new matter and are fully supported by the specification. Accordingly, Applicants respectfully request examination of pending claims 1, 4-12, 14, 19, 21, 22, 24, and 28-30.

Anticipation Rejections under 35 U.S.C. § 102(b)

The Examiner rejected claims 19-22, and 28 under 35 U.S.C. § 102(b) as being anticipated by Becker et al. Patent No. 5,094,712. Claim 20 has been canceled. In light of the amendment and arguments contained herein, Applicants respectfully request that this rejection be withdrawn.

Although the Applicants believe that the original pending claims are sufficiently defined over the prior art of record, the Applicants have amended claim 19 further distinguish the Applicants' claimed invention from Becker et al. In contrast to independent claim 19, as amended herein, Becker et al. fails to teach or suggest "flowing a silicon containing gas into the chamber while performing an over etch step of the etching process, wherein the silicon containing gas is selected from the group consisting of SiH_3CH_3 , $\text{SiH}(\text{CH}_3)_3$, SiHCl_3 , and Tetraethyl orthosilicate (TEOS)" (See Applicants' Claims). Specifically, Becker et al. is silent as to the use of the silicon containing gases " SiH_3CH_3 , $\text{SiH}(\text{CH}_3)_3$, SiHCl_3 , and Tetraethyl orthosilicate (TEOS)" during an etching process as recited in the Applicants' claimed invention.

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For at least the above reasons, Applicants respectfully submit that Becker et al. fails to teach all the claimed limitations in the Applicants' amended independent claim 19. Claims 21, 22, 24, and 28 depend directly or indirectly off of claim 19. Accordingly, Applicants respectfully request this rejection be withdrawn for claims 19, 21, 22, 24, and 28.

Anticipation Rejections under 35 U.S.C. § 103(a)

The Examiner originally rejected claims 1, 4, and 6 under 35 U.S.C. § 103(a) as being unpatentable over Chang et al. Patent No. 5,670,397 in view of Yoshida Patent No. 6,265,316 in the Final Office Action of January 26, 2006. Per a telephone conference with the Examiner on March 21, 2006, the Examiner indicated that this rejection would be withdrawn as the Examiner agreed that Yoshida fails to teach or suggest "introducing a silicon containing gas at a flow rate greater than 25 standard cubic centimeters per minute (sccm)" (See Applicants Claims). Also, per the Examiner's own words, Chang et al. fails to cure this deficiency in Yohsida as Chang et al. "fails to disclose.....the flow rate greater than 25 sccm" (See Final Office Action of January 26, 2006).

Although the Applicants believe that the original pending claims are sufficiently defined over the prior art of record, the Applicants have amended independent claim 1 to further distinguish the claimed invention against Yoshida. Specifically, in contrast with claim 1 as amended herein, Yoshida fails to teach or suggest introducing a silicon containing gas "selected from the group consisting of SiH_3CH_3 , $\text{SiH}(\text{CH}_3)_3$, SiHCl_3 , and Tetraethyl orthosilicate (TEOS)" (See Applicants Claims). Per the Examiner's own words, Chang et al. fails to cure this deficiency in Yoshida as "Chang fails to disclose the silicon containing gas...selected from the

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group consisting of SiH_3CH_3 , $\text{SiH}(\text{CH}_3)_3$, SiHCl_3 , and Tetraethyl orthosilicate (TEOS)" (See See Final Office Action of January 26, 2006).

For at least the above reasons, Applicants respectfully submit that Chang et al. in view of Yoshida fails to teach all the claimed limitations in the Applicants' amended independent claim 1. Claims 4-8 depend directly or indirectly off of claim 1. Accordingly, Applicants respectfully request this rejection be withdrawn for claims 1 and 4-8.

The Examiner further rejected claims 9-11 under 35 U.S.C. § 103(a) as being unpatentable over Chang et al. in view of Olson et al. Patent No. 5,705,433. In light of the amendment and arguments contained herein, Applicants respectfully request that this rejection be withdrawn.

In contrast with the recited features in independent claim 9 as amended herein, Chang et al. does not disclose "etching a dual doped gate structure of the substrate, wherein the dual doped gate structure includes an n-doped polysilicon gate and a p-doped polysilicon gate, wherein the n-doped polysilicon gate and the p-doped polysilicon gate are contemporaneously etched" (See Applicants Claims). Specifically, there is no disclosure in Chang et al. that teaches or suggests contemporaneously etching a trench between two different types of doped polysilicon gates (i.e., n-doped polysilicon gate and p-doped polysilicon gate). Chang et al. simply discloses etching trenches either above an "N-well" (i.e., n-doped well) or a "P-well" (i.e., p-doped well) (See Chang et al., column 5, lines 30-54). Per a telephone conference with the Examiner on March 21, 2006, the Examiner also agreed with this characterization. Taking the recommendation of the Examiner, the Applicants have amended claim 9 to further distinguish the Applicants' claimed invention from Chang et al. Olson et al. fails to cure the deficiencies of Chang et al.

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as Olson et al. is completely silent as to etching between two different types (e.g., p-doped and n-doped) of doped polysilicon gates.

For at least the above reasons, Applicants respectfully submit that Chang et al. in view of Olson et al. fails to teach all the claimed limitations in the Applicants' amended independent claim 9. Claims 10-12 and 14 depend directly or indirectly off of claim 9. Accordingly, Applicants respectfully request this rejection be withdrawn for claims 9-12 and 14.

AMENDMENT

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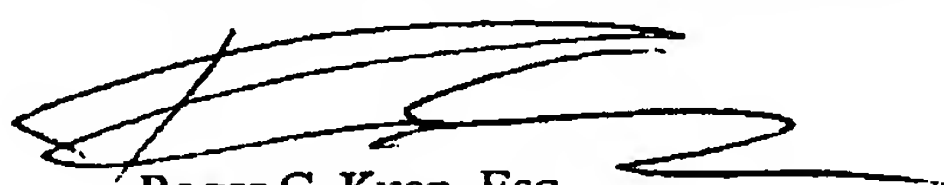
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SUMMARY

In view of the foregoing amendments and remarks, Applicants respectfully submits that the pending claims are in condition for allowance. Applicants respectfully requests reconsideration of the application and allowance of the pending claims. If the Examiner has any questions concerning the present Amendment, the Examiner is kindly requested to contact Roger C. Kuan at (408) 749-6900, ext 6927.

If any additional fees are due in connection with filing this Amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805 (Order No. LAM2P413). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,
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